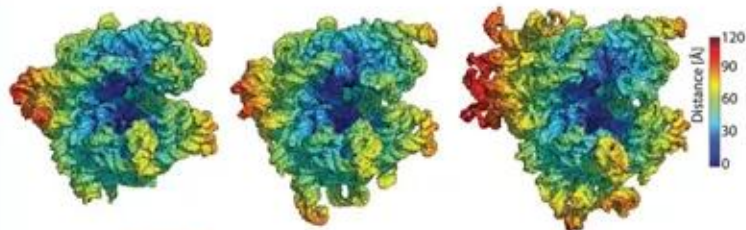
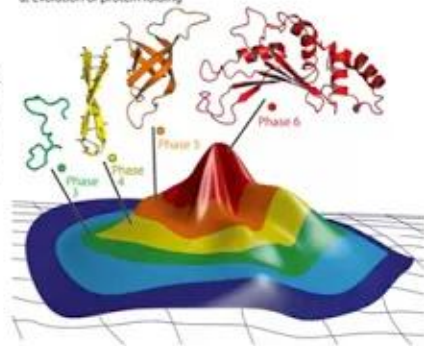


Ribosome – Molecular fossil



“Peeling the Onion”

al Evolution of protein folding



Hsaio *et al* (2009) *Mol Biol Evol* 26(11):2415-2425

Kovacs *et al* (2017) *Mol Biol Evol* 34(5):1252-1260

Bernier *et al* (2018) *Mol Bio Evol* 35(8):2065-2076

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1
00:00:04,550 --> 00:00:02,710
hello all today i'm going to talk about

2
00:00:07,030 --> 00:00:04,560
the minimization of the bacterial

3
00:00:09,030 --> 00:00:07,040
ribosome

4
00:00:11,030 --> 00:00:09,040
comparative sequence analysis of the

5
00:00:12,709 --> 00:00:11,040
ribosomes from different organisms from

6
00:00:15,749 --> 00:00:12,719
the williams lab has shown that the

7
00:00:18,950 --> 00:00:15,759
ribosome being the largest rna protein

8
00:00:21,510 --> 00:00:18,960
complex is also a molecular fossil which

9
00:00:23,269 --> 00:00:21,520
means that it records its history in its

10
00:00:25,349 --> 00:00:23,279
structure over time

11
00:00:27,189 --> 00:00:25,359
what it means what it also means is that

12
00:00:29,509 --> 00:00:27,199
the proteins at the heart of the

13
00:00:32,150 --> 00:00:29,519

ribosome are ancient and unstructured

14

00:00:35,030 --> 00:00:32,160

while the ones on the outside are recent

15

00:00:37,190 --> 00:00:35,040

and more globular

16

00:00:39,990 --> 00:00:37,200

using this premise i am working with the

17

00:00:43,510 --> 00:00:40,000

e coli bacterial ribosome and designing

18

00:00:46,150 --> 00:00:43,520

a platform which will enable us to

19

00:00:47,830 --> 00:00:46,160

reduce the proteome of the ribosome and

20

00:00:50,790 --> 00:00:47,840

structurally as well as functionally

21

00:00:51,670 --> 00:00:50,800

analyze the intermediates